ABSTRACTS
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6 Swine transportation: a critical review. A.J. Zanella*[1], [1]*Department of Animal Science, Michigan State University, East Lansing*.

Poor management during loading and transportation may contribute to the occurrence of sudden death, bruising, pale soft and exudative (PSE) meat and dark firm and dry (DFD) meat in pigs. In the United States, economic losses associated with the conditions above were estimated at more than 43 million dollars in 1994. New laws are in place in different parts of the world regulating pig transportation. Hogs may be transported for a maximum of 24 hours provided that they have water at all times during transport (European Convention for the Protection of Farm Animals During International Transport, 1995). Federal regulations in Canada dictates standards related to management during loading and unloading, duration of transportation, provision food and water, mandatory rest, protection against injury and protection against extreme weather conditions. The welfare of pigs during loading and transportation may be poor. Pigs are exposed to a novel environment and they are often mixed with unfamiliar animals. Noise and vibration can pose severe challenges to the naïve sensory system of the animals. Experimental work demonstrated that pigs deemed vibration as aversive. Injuries ranging from skin lesions to severe cuts and bruises may be observed in pigs mixed with unfamiliar animals during loading and transportation. It has been suggested that pigs may experience motion sickness during road transport. Fasting pigs before transportation reduces mortality and facilitate the work of eviscerating the carcasses. On the other hand, the absence of solids in the stomach may increase gastric pH facilitating the survival and proliferation of pathogens. Our research has focused on the impact of early environment and handling techniques on the responses of pigs to transportation. Transportation of recently weaned pigs, growers and market weight pigs caused an activation of the stress axis and marked behavioral changes. We demonstrated that pigs which were loaded using electric prod had higher levels of activity (rooting and investigative behavior), heart rate and rectal temperature during the 15 minutes post-loading than pigs loaded using a conventional hurdle. Transportation of breeding stock and weaners has not received much attention and further research in this area is needed.

Key Words: Pigs, Transportation, Welfare